



AMERICAN FORK CITY

SOLAR

MINIMUM PLAN REQUIREMENTS

Please review this checklist and make sure you have all of the necessary information before plan submittal. If you have any questions regarding plan submittal or this checklist you may contact the Building Division at 801-763-3065.

All information must be submitted online.

- ☐ **2020 NEC 690.4 (C) Qualified Personnel:** The installation of equipment and all associated wiring and interconnections shall be performed **ONLY** by qualified persons.
- ☐ **Site Plan:** A detailed site plan showing the location of the home and all PV system components on the property. Show all fire code clearance requirements. Note if an energy storage system is being installed include these system components.
- ☐ **Mounting system:** Provide detailed information on the module mounting system and also the weight of all components on the roof. Note if the home roof rafters are engineered trusses. Also note the type of roof covering (shingles, metal or tile) and how many layers of covering there are. Provide engineering for loads on roof as well as uplift.
- ☐ **One-line diagram:** A detailed one-line diagram is required and must show the type of PV system being installed (a single inverter system with one or more strings of modules connected in series, a micro inverter system or an AC module system), the exact number and layout of modules and how they are connected together (in series or in parallel), all wire types, all wire sizes, conduit types and sizes, detailed info on the grounding wiring and connections, the locations of all circuits and system components on or in the house, and the ratings of all fuses or breakers.
- ☐ **Electric panel to be back fed:** Note which home electrical panel the PV system will back feed and give the location and rating of that panel. Please provide a picture of the panel that is going to be back fed with a picture of its interior label. Note: Code violations in existing panels will need to be corrected. If the service panelboard will be upgraded, then the new service panel must comply with the requirements of NEC 230.71 and NEC 230.62 (C).
- ☐ **Module spec sheets:** Provide the PV module (solar panels) spec sheets showing the modules' STC rated watts (Pmp), volts (Vmp), amps (Imp), open circuit voltage (Voc) and short circuit current (Isc). Modules must be listed UL 1703.
- ☐ **Inverter spec sheets:** Provide the inverter manufacture spec sheets showing the amount of watts and volts the inverter can safely handle and also noting what the inverter's max rated AC output amps and voltage is. Utility tied inverters must be listed as "utility

interactive" meeting UL 1741 and have ground fault protection. For energy storage systems include battery spec sheets. Battery inverter must be UL 1741 listed, systems must be tested and listed UL 9540.

- ❑ **Total array power:** Provide the total amount of watts, amps, volts, open circuit voltage (Voc at the coldest possible outside temperature; see NEC 690.7) and short circuit current that the array can produce (this is not required for systems with micro inverters).
- ❑ **System components:** Provide information on the different types of components that will be used in the system and how they are to be installed. Also show that all equipment is listed and rated for the type of voltage (AC or DC), amount of voltage and the amount of current that it could be subjected to.
- ❑ **System labels and markings:** Provide warning label information for entire system to be installed (see NEC 690; NEC 706.15 (C) for energy storage systems).
- ❑ **Bonding:** Provide bonding information and specifications for system components.
- ❑ **Rapid Shutdown:** Provide information and equipment listing (see NEC 690.12)

This check list is only a basic list of items needed to begin a Solar PV system plan review and is not all inclusive. Having all the items listed on this checklist does not guarantee a permit will be issued and any additional plans, information and or requirements may be requested or required by American Fork City at any time.

EVERYTHING LISTED ABOVE MUST BE INCLUDED WITH THE PLANS, OR THE PLANS CANNOT BE ACCEPTED.